Claims

1. A method for the production of an optical transmission element (BA) comprising at least one optical waveguide (LW) and comprising a chamber element (AH) surrounding the optical waveguide and enclosing an internal space,
- in which a filler composition (FM) in a foamed state is applied discontinuously to the optical waveguide (LW),
- the optical waveguide (LW) is subsequently supplied to an extruder (EX), the latter forming a chamber element (AH) around the optical waveguide,
- in which the filler composition (FM) stabilizes within the chamber element (AH) formed and, in the final state, forms a plurality of dry compressible filler elements (FE, FE1 to FE4), each surrounding the optical waveguide.

2. The method as claimed in claim 1,
characterized in that
foamed polyurethanes or silicones are used as filler composition (FM).

3. The method as claimed in claim 1 or 2,
characterized in that
during the stabilization process of the filler composition, the cross section of the chamber element (AH) is not altered by the filler composition (FM).

4. The method as claimed in one of claims 1 to 3,
characterized in that
the foamed filler composition (FM), upon introduction into the extruder (EX) has a diameter that is approximately equal to an internal diameter of the chamber element (AH).

5. The method as claimed in one of claims 1 to 4,

characterized in that
the foamed filler composition (FM) expands after introduction into the extruder (EX) in order to produce a positively locking fit with respect to the chamber element (AH).

6. The method as claimed in claim 5,
characterized in that
the foamed filler composition (FM) expands by approximately 10 percent of its volume after introduction into the extruder (EX).

7. The method as claimed in one of claims 1 to 6,
characterized in that
at least two nozzles (D1, D2) are used which apply the foamed filler composition (FM) uniformly to the optical waveguide (LW) approximately concentrically and in the radial direction of the transmission element.

8. The method as claimed in claim 7,
characterized in that
the nozzles (D1, D2) are arranged opposite one another and enclose the optical waveguide (LW) between them.

9. The method as claimed in claim 7 or 8,
characterized in that
more than two nozzles (D1 to D4) are used which are arranged in star-type fashion in the radial direction of the transmission element and enclose the optical waveguide (LW) between them.

10. The method as claimed in one of claims 7 to 9,
characterized in that
piezocontrol valves are used as nozzles (D1 to D4).

11. An optical transmission element (BA)

- comprising at least one optical waveguide (LW) and comprising a chamber element (AH) surrounding the optical waveguide and enclosing an internal space,
- comprising a plurality of dry and compressible filler elements (FE, FE1 to FE4), which are arranged in the internal space and are formed by prefoamed material (FM), the filler elements exerting a defined press-on force against the chamber element (AH) and against the optical waveguide (LW) in order to fix the same in the longitudinal direction of the transmission element,
- in which the filler elements (FE, FE1 to FE4) in each case surround the optical waveguide (LW), fill existing interspaces in the cross-sectional plane of the transmission element (BA), and make contact with the optical waveguide (LW) and the chamber element (AH) in a form-fitting manner.

12. The optical transmission element as claimed in claim 11,
characterized in that
the material of the filler elements (FE, FE1 to FE4) is formed by prefoamed polyurethanes or by silicones.

13. The optical transmission element as claimed in either of claims 11 or 12,
characterized in that
a plurality of separate filler elements (FE, FE1 to FE4) are arranged in the longitudinal direction of the optical transmission element (BA) with intervening interspaces (ZW) not occupied by filler elements.

14. The optical transmission element as claimed in one of claims 11 to 13,
characterized in that
the filler elements (FE, FE1 to FE4) contain an agent that is swellable upon ingress of water, for sealing purposes.

15. The optical transmission element as claimed in one of claims 11 to 14,
characterized in that
the filler elements (FE, FE1 to FE4) are configured in such a way that they can be easily and completely stripped from the optical waveguides without the use of additional tools.